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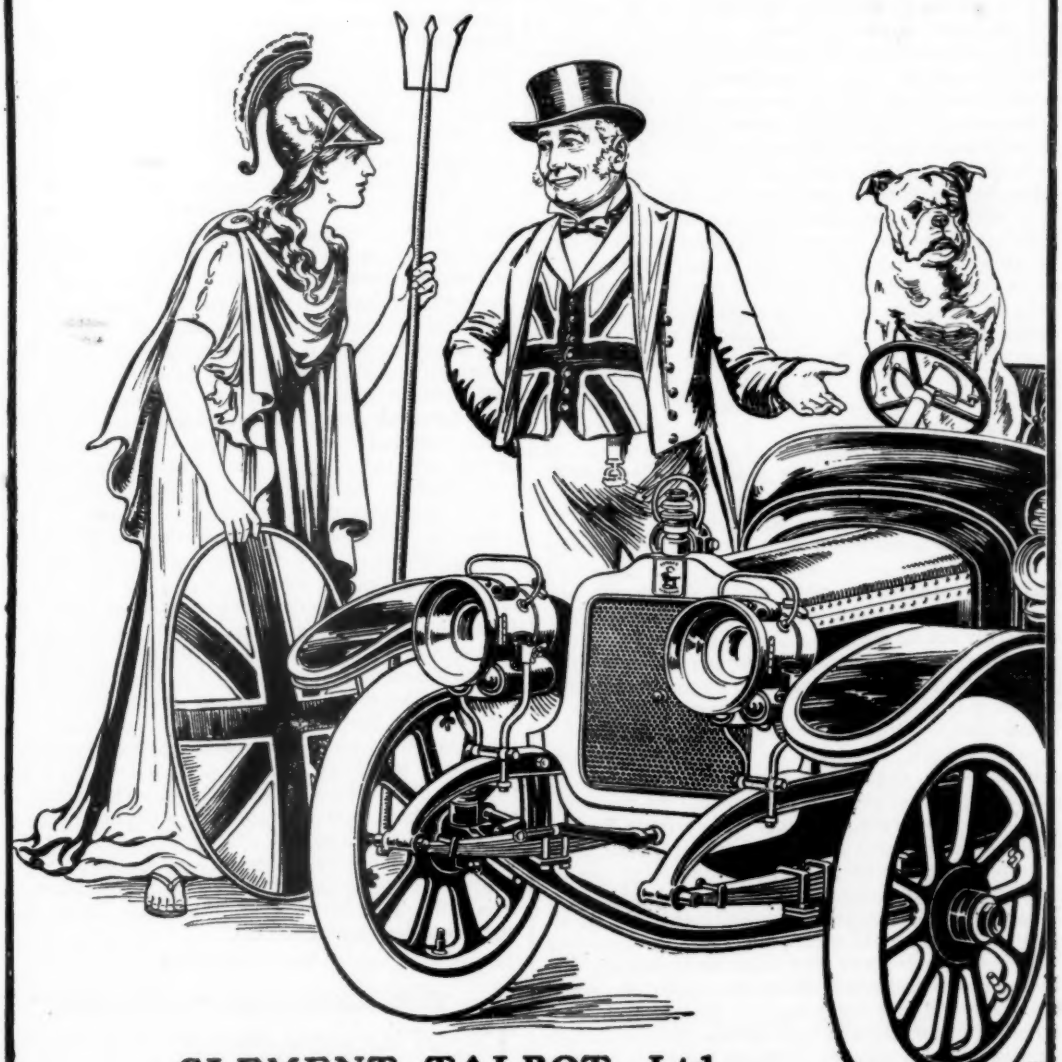
"ALL BRITISH"



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"INVINCIBLE"

TALBOT

SUPPLEMENT.

LONDON: 16 NOVEMBER, 1912.

THE CROWD AND THE CAR.

BY ONE OF THE CROWD.

IF we might judge by the crowds which have made movement at the Motor Show at Olympia during the week a matter of negotiation, we should have to conclude that the whole world were eager in its search after motor-knowledge. Seldom does an exhibition command the same amount of outside support that is given to this annual fixture. Primarily one would imagine that the Motor Show would be attended by members of the trade, anxious possibly to impart, anxious certainly to pick up ideas, and by a fair number of people who would seize the opportunity of deciding from general inspection on the particular car they would buy. That a roaring trade has been done by the exhibitors at Olympia is fairly certain; orders have been freely taken by well-known makers who, it might have been thought, would have taken them anyway, and by some who have been able to convince the visitor that the hall-mark of a well-known name is not everything. When exhibitors declare themselves satisfied with the business done at their stands it is a fair assumption that they have reaped a fine harvest. Exhibitors are as ready with their grumble as other mortals when all is not well. There has been no grumbling at Olympia.

The rich man who does not mind whether the price of a car is £750 or £1000 has not by any means been the chief patron of the ten days' show. He was in evidence of course, but on half-crown days not less than on shilling days others who could not be overburdened with wealth were active investigators of the merits of chassis and were interested students of body comforts and alignment. It has been matter for astonishment that hundreds of people who would never have dreamed of buying a horse have been in negotiation for a car. How do they manage it? is a question that has been whispered again and again. Is it that the world is better off than we imagined? Even the cheapest of motor-cars that are worth a moment's consideration involves an initial outlay that would buy two or three good horses, and the upkeep of the car will assuredly not be less than that of the horses. The success of the motor industry has unquestionably been due in large measure to the fact that numbers of people of modest purse have found the longing to own a car irresistible. Of the thousands who have visited Olympia this week it is safe to say that not 10 per cent. would have considered themselves justified in keeping a pony and trap. Yet probably 90 per cent. are ambitious to secure a motor. They have flocked round the cheaper cars; they have talked of the boon the Americans have conferred by showing what can be offered for a hundred guineas; they have examined the machine with the same eager curiosity that the small boy, with half-a-crown to spend, bestows on toy engines and toy motor-boats; and they have embarked on discussions of points and prices which have called the stand attendant's pencil and notebook into active service.

To realise what motoring has become to the British people it is indeed necessary to devote a certain number of hours to such a study as Olympia has provided. The car apparently is indispensable to the crowd. One must be bought even though it be necessary to practise severe economies in other directions or risk personal solvency. To put savings of £100 or £200 to such a purpose would be intelligible did the outlay end there, as it ends with the boy's half-crown. One day's motoring a week means an addition to outgoings which for the purchasers of cheap cars might seem serious. There is petrol consumption to be thought of, and, apart from tyre troubles, incidental hotel expenses are inevitable. The burden would certainly be considered intolerable if it fell in the form of taxes or school bills or some other compulsory impost.

What, then, is the secret of the fascination of motor-car possession? How comes it that the retired army man, the partner in a small business house, the professional man who complains of hard times, all seem bitten with the same desire, and somehow endeavour to gratify it. It is no longer the novelty of the thing that appeals. Motor-cars have become so much the fashion that we have even ceased to abuse their drivers as road hogs. Many who in earlier days regarded them as an abomination are among their votaries. It is not that the machines are mere toys to tickle the fancy of the adult mind. Has the impatience of the age something to do with it? Men who used to walk a mile to the railway station or to the office now feel that the car is the only way of getting there. Women must have a car to take them shopping. The ladies possibly have more to do with the craving than appears. Their interest in all that goes on at Olympia is active, and they carry the mere male person off willy-nilly to examine a vehicle that has taken their fancy. No doubt mother and daughter have their own special arguments in appreciation of a car that would do much to promote domestic happiness, and paterfamilias is more easily convinced than when the object of admiration is the product of the milliner's art. Secretly or openly, paterfamilias himself wants a car: maybe in his own prosaic way he has been seized by the demon of speed which Henley turned to poetic account.

In hundreds of cases the car has come as a boon and a blessing; the country doctor knows its advantages; it has been possible where horses were out of the question; it has attractions which can never belong to railway travelling; it panders to a sense of independence; it has revived the life of roads long since regarded as grass-lined survivals. It has gone far to revolutionise civilised life and to make civilisation where none exists. Its claims are so insistent that in Canada and America roads have been, are being, and will be built especially for its accommodation. To participate in all this movement may make a man feel that he is in the very van of progress. Then there is the social side: visits to friends otherwise difficult of access; invitations to others to take a run "in my car". So may a man attain importance in eyes which otherwise would regard him not. Whatever the explanation, the interest of the crowd in the Olympia Show has been very real. It grows yearly, and the motor-car industry may gather from the readiness of the crowd to put down its shillings, even its half-crowns, that the future will be one of increasing prosperity. The day when the supply will overtake the demand is not near. We have gone far since the first Motor Exhibition was held in 1902; we seem to be rapidly approaching the time when the motor-car will have reached a state bordering on the perfect. Yet who shall say what developments are in store and how soon the vast area of Olympia may prove unequal to the demands which the crowd and the car will make upon it? If both increase in numbers in the next few years, as they have in the past few years, it is difficult to know where the Motor Show of, say, 1915 is to be accommodated.

THE AMERICAN "INVASION."

THERE is a certain grim echo to the laughter of industrial automobilism at talk of the American invasion. The wiser men in the industry hear it and know something of its significance. The unwise men have their ears stopped by the cotton-wool of present success.

This is, doubtless, not the most opportune moment to discuss a matter that has been a minor obsession in motoring circles for a considerable time. Never since motor-car making became a more or less settled industry has it attained to such heights of general prosperity. Over the past year, demand has consistently exceeded supply in a surprisingly large number of factories. British manufacturers, together with the concessionaires for foreign vehicles, have done exceedingly well. There is a common atmosphere of content

abroad, and all the portents justify optimism for the new motor year which opened with the annual show at Olympia.

In addition there are the fierce exactions of the Motor Show itself. I write in the midst of the Olympia week, when the minds of the professional motor men are given over to a daily twelve-hour pursuit of the bread that perisheth and the nightly consumption of the bread (and what not) actually secured or in favourable prospect. Mine, therefore, is, for a little while, likely to be a small voice crying in a wilderness of indifference.

Nevertheless, the subject of American and other foreign competition is certain to be revived in the near future. We have to face a situation which may presently become desperate. Into what is at best a comparatively small market the products of alien motor factories are pouring without restriction. Every one sold, and they are selling largely, stands for a dead loss to the British industry. Every one that sells in competition with the British vehicle means that, for reasons of price, reputation, mechanical efficiency, coachwork, general finish, or salesmanship, we are something less than our invader. The further fact that we cannot enter our invaders' territory except we pay for the privilege is not an unimportant factor in the situation.

With fiscal matters, however, I am not here specially concerned. Nor am I concerned to make lamentations because the imported vehicle has a very considerable appeal for the British motorist. So long as that holds the British manufacturer has a lesson to learn either in production or distribution. But I am concerned to suggest that present British success is not a reason for present or future British apathy. Optimism is an excellent thing when it accompanies intelligent appreciation. The optimism that gets no further than a hope that we shall muddle through somehow is the optimism of industrial insanity.

What a certain daily newspaper discovered a week or so ago as the American invasion commenced about the same time that the British manufacturer seriously settled to the production of automobiles. Our invader, therefore, is quite an old friend. We laughed at him then, reminding him with a fine irony that once his forebears essayed the capture of the British market with a bicycle. We laugh at him to-day; and still we tell him about that bicycle. Still we tell him that his car is not suited to British conditions. Still we tell him that directly British motorists commence to find out what a string and hoop-iron waggon of trouble they have bought, he will have a very cold and uncomfortable time. But the invader refuses to be impressed. Where he arrived in tens, to-day he arrives in thousands. What was a single make of car is to-day about thirty different makes. And the entirely stupid British motorist continues to buy. That is why our laughter begins to have an echo that is grim. When our present industrial fatness is depleted by the necessity of lean years the grim echo will sound much louder than the laughter!

The Continental motor manufacturer in the early years of the automobile was our schoolmaster. British self-sufficiency always accepts the foreign schoolmaster with poor grace. Our national imagination could not see the place of the car on the road. We were astride the horse. Gradually our vision cleared, and with it came a little humility. We entered the Continental schools to learn. We make excellent pupils. To-day if we have not bettered our instruction we are easily the equal of our one-time masters.

History repeats itself. We are passing through very much the same stages of development in relation to America. America is our unacknowledged schoolmaster, not so much in matters of engineering erudition, but in industrial organisation. After our laughter has entirely died, and while we are still working for a tariff, we might perhaps concern ourselves a little with American methods of production—and distribution.

The essence of American organisation is standardisation and specialised production. Few American cars are wholly produced in a single factory. Sometimes the factory from which the car finally issues is merely an assembling depot for parts manufactured in various other factories, each of which may be largely given over to the manufacture of a single part—a back axle, an engine casing, a crank-shaft, and what not. That is specialised production. Standardisation is, mechanically, just a horrible word for finest exactitude in precision work, every part minutely worked to a standard gauge, and therefore interchangeable with any other similar part. In the completed vehicle the word also covers exactly identical body-work and accessories. Shortly, standardisation is the apotheosis of machine industry and concentrated factory organisation. By the side of it some Continental and British methods are, to make a violent comparison which need not be too vigorously applied, as handicraft to machine industry. When, as is very often the case, the whole American factory organisation is concentrated upon a single model we have an economy in production which, other things being equal, gives the American vehicle a large monetary advantage on the market.

Mainly, of course, it is this price advantage which has won the American car its undoubted victory in the United Kingdom. Mainly, again, because of this price advantage, the cheap American vehicle has opened a new field of demand. The British manufacturer has not catered for that demand. That is why his prosperity has not been directly affected. He is holding his own price market. In the immediate sense the only competitors he has need to trouble about are those in his own field. Yet, quite quaintly, one rarely hears an outcry against that type of competitor. All the outcry, when it is made, is against the cheap American car which, generally, has made a new motoring public of its own, and to that extent is not a competitor at all.

That cheap car public is, however, a market of enormous potentiality. We cannot hope to touch it until we are prepared to learn in the American school how it may be done. The greatest difficulty thereafter is the size of the market. The British market is comparatively small. The American price is only possible upon the hypothesis of enormous output. But it is at least debatable whether there is not a point beyond which quantity ceases to be a factor in economic production. Is that point within the possibilities of the British manufacturer having regard to the limitations of potential demand? That is the question. I believe the answer is in the affirmative.

Meanwhile it is clearly past the time when we could afford to laugh at an American invasion. There never was a time when we could afford to jeer at American methods or their results. The advent of the American car has made an educational factor as great as was the advent of the early Continental cars. It were better to profit by the instruction available than to laugh, or jeer, or rail at the means by which the instruction comes. Also it is at least a desirable thing that, until we can deal with the cheap American vehicle, we should not neglect to remember that the real British competitor of the present comes more from the East than the West.

Alex. J. M. Gray.

ON SHOW AT OLYMPIA.

I. The Chassis.

THE month of November is well chosen for the period of the great Motor Show as being between the touring season and the Christmas season, and more than any other period of the year it is the most suitable for the careful study of the most recent designs and improvements in motor-car manufacture. The Motor Show of 1912 will be outstanding on account of the large number of improvements, fresh ideas, and new designs that are put forward. This eleventh annual exhibition, promoted by the Society of Motor Manufacturers and Traders, was opened without ceremony. It would seem that ceremony would have been out of place, and it is certainly worthy of note that, as

matters stood, by noon on the opening day the vast hall was comfortably filled with sightseers and prospective buyers. During the afternoon the attendance increased, but, despite the fact that there was a record number of 353 exhibitors, the foot-ways, though crowded, still admitted of movement. This was because the space in the gangways had not been cut down, the extra firms being accommodated by the principal companies voluntarily lessening the space which had been allotted to them. It has frequently been said that the Olympia Motor Show is a business exhibition, and that little effort is made to get any spectacular effect. While the remark still applies on the business side, it was otherwise disproved on this occasion, for the general appearance of the display was particularly attractive. The value of the cars exhibited is said to be over a quarter of a million pounds, and this in addition to the value of the accessories. The exhibits were grouped differently this year; for the first time the firms showing tyres were accommodated on the ground floor, partly as the result of the curtailment of the space of each exhibitor, and the galleries were left free for the constantly increasing number of firms making or dealing in accessories. Notwithstanding that these additions necessarily excluded some interesting foreign cars, the exhibition has been quite representative of the world's motor industry.

The keenness of the public to inspect the great display was wonderful, and on Saturday, the second day of the Show, a new record in attendance was put up. The present exhibition is undoubtedly the triumph of the coach-builder, but of that more later. On the whole the prices of cars are substantially what they were a year ago, but much better value for the money is being offered, as manufacturers have preferred in most cases to improve their products in various details rather than to cut prices. For £200 to £250 one can obtain a splendidly designed four-cylinder car, and for an even smaller sum equally satisfactory, though possibly less capacious, cars are now available. The man with £300 to £400 to spend has a still wider range of choice, particularly of cars of the 12 to 15 h.p. class. One point that the potential purchaser must bear in mind is that, while some cars are priced complete, others are priced simply to include the chassis. As the equipment necessary to the complete car is generally expensive, an allowance of some £60 to £70 may have to be made.

It cannot be said that any great radical change has been made in any portion of the design of the 1913 car. Though the chassis presents few novelties, for the engineering mind great interest attaches to such developments as the lightening of moving parts while not affecting their strength; the simplifying and cheapening of manufacturing processes; the discovery and use of more metals; details which are almost daily receiving consideration. In outward appearance one chassis is now very much like another, and during recent years manufacturers have paid great attention to body work; possibly this was with the desire of attracting the attention of the general public more to the car than to the actual working parts. Here, doubtless, we have the reason why such firms as the Rolls-Royce, Talbot, and one or two others have not shown the chassis. In this year's exhibition, therefore, the feature is the body work, coupled with a large number of new small four-cylinder cars. The effort still is towards a better blending of the chassis and coach work. It is noticeable that in several designs the bonnet expands gracefully towards the rear, the expansion merging into a graceful "flare", which in turn gives place to a gently receding dash, the body proper following as though it were being drawn. In the chassis, monobloc is popular for the four-cylinders, and cylinders grouped in threes seem to be on the increase. For the six-cylinder engines Thermo-Syphon cooling is also on the increase. Automatic regulation of the carburettor and magneto is more in evidence. The dual ignition system would appear to be nearly displaced by the single high-tension magneto and cam shaft, and in more cases actuated by silent chains. Valves are mostly one-sided, and manufacturers seem to favour a moderate bore-stroke ratio, avoiding the square engine on the one hand and the expensive long-stroke motor on the other. Increased steering lock accompanies provision for adjusting the steering-wheel to suit any requirements. Petrol tanks in quite a lot of cases have greater capacity. Wheel bases are slightly increased, and it is noticeable that the recovery by the bevel drive of the ground, or some of the ground on which it had recently been yielding to the worm powers, seems to be common to all chassis.

The departures in chassis building are, however, in some cases striking. For instance, in the smallest model De Dions, 7 h.p. two-cylinder, the wheel basis has been increased more than seven inches, and in place of the accelerator pedal the engine is controlled by the De Dion standard type of combined decelerator and foot-brake pedal. The normal running of the motor is set by a lever on the steering-wheel. This is three inches wider, and, in addition to unswept frame, three-quarter elliptic springs are fitted on the rear in place of the semi-elliptic springs formerly used. There is also a new type of gear box, and cam shaft and magneto and oil pump are chain driven. In other makes also considerable changes have been made. For instance, the '12, 15, and 25 h.p. Talbot cars are all fitted with the new type of front axle with ball-bearing pivots, as previously fitted to the 20 h.p. model only; while, with regard to timing gears, in future only two-gear wheels will be used, and with silent helegal teeth. All the cars are fitted with long, wide flexible springs of semi-elliptic type, adapted after most exhaustive tests and fully efficient for colonial requirements. This make of car is very popular in Australia and South Africa, where during the last year it has put up some excellent records.

One explanation why certain firms have not shown their chassis is that the exhibit attracted draughtsmen rather than customers, and that, while the draughtsmen took accurate sketches of the chassis, the public were unable to obtain foot-room on the stand. One cannot help regretting the decision, as it tends to reduce the value of the Motor Show if one cannot study an interesting technical feature in a particular chassis. This point is forcibly illustrated by the interest taken in the chassis which were on show. Chains continue to play a big, though varying, part in the working of the car. There are a few chain-driven vehicles, but the majority are bevel or worm driven. The chain has entered into another sphere of usefulness; in linking up the magneto and other reciprocating parts the silent chain is extensively used. On the whole the chassis exhibited may be summed up as of considerable interest, but, while there have been certain changes, there has been nothing really outstanding.

II. Body Work.

If there has been little really of note in the matter of chassis, the same cannot be said with regard to bodies, to which many manufacturers have given a considerable amount of attention. The successful attempt to blend, as it were, the carriage work with the chassis means that the majority of exhibits no longer give one the impression that the body has been built regardless of its resting-place. It may be freely stated that one of the principal characteristics of the modern motor is the combination of convenience and comfort. Great ingenuity is displayed in discovering devices that will lessen the difficulties of driving. When one compares the magnificent cars shown at Olympia with the little petrol cars that started out in 1896 for the great run from London to Brighton one is immediately struck by the tremendous advance and the enormous amount of brain-power that must have concentrated to produce such results. Electric lighting is now becoming very popular. Detachable wheels or rims are to be found on the majority of cars, and now self-starting devices are being fitted more generally than ever. To add further to the comfort of the car, seats are made capable

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of being adjusted to individual needs; silence characterises the majority of the new models, and excellent protection against bad weather is afforded in the touring car.

As regards the coach work, many of the builders rely on the handsomeness of the internal fittings and sombre panels of the carriages to attract attention, while in other cases the public eye is drawn to some magnificently copper-coloured car that looks like gold in the bright light. Bright colours naturally attract attention at an exhibition where standholders are rivals. One or two makers have copper-coloured or bright-coloured cars that at once catch the eye. Another maker has a saloon, of which the body work alone would cost the purchaser a heavy sum. This car is built for a man apparently, and its interior equipment contains much of the comfort of a small flat. There are wooden cupboards containing knives, forks, spoons, glasses, decanters, and other accessories suitable for tea, luncheon or dinner, as well as a regular smoking chest and a lavatory basin with the water laid. This is surely the motor-car de luxe. The seats of this car can be drawn out and converted into couches, somewhat similar to those of Continental railway carriages. There is another car that attracts considerable attention exhibited by the Belsize Company, of Clayton. It is a 15.9 h.p. car shown in both finished chassis form, and is a completely fitted five-seater in a delicate shade of green. The particularly handsome body is of the stream-line torpedo type, with scuttle dash. This car is to be sold for £350, and in design, finish, and all else it bids fair to become the most popular car yet put up by this firm. Undoubtedly in body work this stream-line effect is the feature of the moment. Cabriolet and saloon bodies well maintain the popularity into which they sprang upon their first introduction. There can be no doubt that in many details the new bodies are better made than the old. It is noticeable that in the coming season dome roofs are likely to increase in popularity, combining as they do improved appearance with greater strength and lightness. One firm has an ingenious system of sliding doors, evidently designed for the purpose of maintaining bodies at a comfortable temperature when in hot climates. These doors, instead of being hinged, slide into the side panels, and therefore, whether open or closed, there is no danger of their being torn off, as would happen in the case of the hinged doorway. The occupants of the car can regulate the temperature of the car at will; surely a great convenience in very hot weather.

There is a natural trend, on the part of builders, towards lightening bodies. Chair seats, which were one of the novelties of last year's show, have again been in evidence, and some very comfortable contrivances have been arranged. The lightening of bodies has been chiefly confined to those of the closed type, especially in cabriolets, which, when first brought out, were not of a light nature. In the matter of hoods, of course, there has been considerable improvement since the cape and cart was brought into use. These light hoods are extremely strong, and, while standing the test of wet or windy weather, are easily collapsible, take up little room, and add very little to the weight of the car. Broadly, the display of body work at Olympia this year may be described as excellent. It speaks well for the great advance made in the motor-car industry, and upholds the high reputation of early British carriage builders.

III. Tyres and Accessories.

The accessory section this year was considerably enlarged. The tyre section was taken downstairs, thus giving more room in the galleries. Accessories play so important a part in the car's efficiency that it is difficult to understand the argument that the Olympia Show should exclude them. The motorist cannot know too much about them. The space occupied this year was certainly not wasted. Most ingenious devices for every kind of necessity that may come the way of the motorist have been shown. Lamps, hooters, horns, and tools were only a minor, though of course an important, portion of the accessory section. Few motorists appreciate to the full how necessary it is to have a thorough knowledge of the latest developments in accessories, since it is to accessories chiefly that they must look for economy in working. First, there is the matter of the carburettor, and in carburettors there is a great improvement and several new designs. Of course, the well-known carburettors, the Stewart Precision, Zenith, Claudel-Hobson, White & Poppe, that have done admirable work during the past year have made a good show. The Claudel-Hobson especially has done much in the last few months, for it was fitted to the Peugeot car which won the French Grande Prix, as well as to the Sunbeam car which broke all the hour and twelve-hour records a few weeks ago at Brooklands. There is a newcomer among carburettors; the Stewart Morris paraffin carburettor has just made its appearance in its recent successful trials under R.A.C. observation. This paraffin carburettor has been subjected to stringent bench trials and has accomplished a thousand miles road test on an 18 h.p. 30 cwt. car fitted with solid tyres. During this trial the sparking plugs and engine were not cleaned, nor were the valves touched, and at the end of the test the plugs and valves were found to be in perfect condition and the exhaust-heat vaporiser quite free from carbon deposit. It is obvious from this that perfect combustion of fuel had been obtained. The exhaust proved perfectly normal in all conditions of running, and the owners of the car, who are expert engineers, state that the acceleration of the car was exceedingly good and the power equal to petrol. What this means in the present state of the high prices of petrol, motorists can easily judge, and in consequence Stewart Morris paraffin carburettors are being looked to for relief.

In the tyre section the much advertised Bibendum drew amused crowds to the Michelin Tyre Company's stand. Interest in tyres has not been confined to the most widely advertised. There are others. Among the sundries introduced for next season may be noted the tyre pump with a gauge let into the handle so that the dial can be read without trouble, a bolt valve plate and a dummy bolt with protection cap to fill up holes for those motorists who have discarded security bolts or have lost one or more from a tyre. The Gaulois tyres are known all over Europe, and for 1913 there are listed many types suitable for small cars and large cars, British and American. The importance of the skidding question has been fully recognised by tyre makers. How is skidding to be prevented in all circumstances? The Liversidge tyre was specially designed to that end; its purpose is to prevent skidding on any surface, wet or dry.

There are some good designs in detachable wheels. Riley detachable wire wheels are now fitted to over one hundred and eighty makes of European and American cars. We understand that for the forthcoming season two new types of wheels are being supplied, namely, the Riley stud drive and the new flue drive, in which the conical steering is combined. In addition to these tyres, the Riley Company, by arrangement with the Goodyear Tyre Company, of America, are supplying the Riley detachable wheels in conjunction with the Q.D. detachable rim. This rim is well known in connection with wooden wheels. The great feature of the Q.D. rim is that the flange into which the beaded part of the tyre fits is immediately removable, consequently with this device one can dispense with tyre levers, which can only be used at the risk of nipping the tubes. The Forse detachable rim has also attracted attention. It consists of a steel rim divided and hinged diametrically and with short hinged ends. These are quite short sections which can be folded inwards. Instead of the usual procedure of fitting a tyre on to a complete tyre the Forse rim is fitted into the tyre, the hinged sections allowing this to be very easily done. When the rim is adjusted to the beads of the cover the short hinged sections have to be forced into position by

means of a special tool, and thus the rim circle is complete. The Midland Rubber Company, who claim to have been the pioneers in issuing guarantees with pneumatic tyres, have shown both pneumatic and solid tyres.

New light Warland rims, now made so as to prevent the ingress of water, have been designed for small British, American, and Continental cars. It is said that over sixty cars at Olympia are fitted with these rims: the figure gives a good idea of their popularity. In the new pattern Stepney wheels four flanges are supplied. One is bolted permanently to the wood felloe of each car wheel. By this means the Stepney wheel can be fitted in a few seconds, as it has merely to be slipped into its position on the flange. The Stepney road grip tyre is specially designed to combat the skid evil. It is an all-rubber tyre. Among the Self-Sealing Rubber Company's productions are the Hermetic motor tyres, both in the plain and non-skid types, and the Hermetic detachable tyre linings, which are rubber protected. Other items of interest to the practical motorist are their patent frictionless security bolts and patent security bolt manipulator, tyre shields, Fixkwik patches and solution for the rapid repair to air tubes and the Hermetic tyre stopping for cuts.

A great deal of attention has been given this year by manufacturers to the question of suitable lighting for motor-cars. Electric lighting has hitherto occasioned much difficulty. First, there was the expense, and, second, the fact that an invention was required whereby power could be stored sufficient to light the car at any time. Messrs. Vandervell have found the solution. The C.A.V. dynamo lighting equipment is appropriately called the "simple system". Several complete sets at Olympia have shown the manner of working when mounted upon a car, the dynamo being driven at widely varying speeds by an electric motor in just the same way as when coupled to a car engine. Alternative models are designed in the switch-boards for controlling the set, while a range of seven different types of standard dynamos of different voltages and outputs effectively covers a wide variation in the requirements of motorists. There is also a large variety of accessories, such as roof and corner lamps, dash-board and steering-pillar lamps and electric horns. Apart from lighting batteries, a full range of standing ignition accumulators represents about 175 different types. The aim of the lamp maker has, of course, been to secure a powerful light which does not strain the sight of the driver nor blind others on the highway. Messrs. Dunhill's Anti-Dazlo head-lamps save both. The Bleriot "No Glare" head-lamp, by an ingenious arrangement, turns the whole of the light to the ground in front of the car, thus increasing the efficiency of the lamp to the driver and removing all the dazzle and glare. The "No Glare" lamps are constructed for electricity or acetylene. A new generator for acetylene lamps can be carried charged for months without deterioration of carbide.

Several new forms of portable vulcanisers have been brought out for the coming season. One is a neat metal device in the form of a box provided with metal interior ribs. This vulcaniser is heated by pouring a couple of measures of petrol into the box and igniting it, the ribs serving to distribute the heat evenly. There are new designs in steering-wheels, and the excellent finish of these wheels adds considerably to the appearance of the car. Self-starting devices are numerous. There is, for instance, the new N.B. self-starter and tyre inflator, an appliance which for four years has saved owners much time, fatigue, and annoyance, and has established in this direction a standard of comfort. In 1910 the N.B. self-starter and tyre inflater was submitted to the experts of the Royal Automobile Club for public trial and report. The trial was held under the open competition rules of the R.A.C., and demonstrated beyond question the practicability and reliability of this self-starting apparatus. The Star has brought out a new self-starter. The apparatus takes the form of a cylindrical fitting in shape something like a Thermos flask placed at the centre of the base of the radiator at about the point where the ordinary crank projects from the chassis. The device itself needs neither electric current nor compressed air, but is a contrivance fashioned of powerful construction and wound up automatically by the first twenty-six revolutions of the crank shaft of the motor after its start. The re-winding mechanism automatically disengages because the springs are then at proper tension to be ready for starting the car again, being held in readiness for that performance by a brake-band. All that the driver has to do to start the engine is to press a pedal on the foot-board of the car connected by trip-cable to the release-cable in the construction of the car; thereupon the brake-band is free and the springs begin to unwind, because the tension is much greater than the compression of the cylinders of the motor. The starter turns the motor over from six to eight complete revolutions a minute. From what has already been done with self-starters there is reason to believe that during 1913 a great deal will be accomplished in perfecting this important accessory.

Though Olympia's space is undoubtedly restricted, so that even an old-established firm such as the Rochet-Schneider Company were unable to obtain a stand, it must be said that the Society of Motor Manufacturers and Traders made the most of their opportunities and got together an exhibition which it will not be easy to eclipse in future years.

EXHIBITION NOTES.

The Victor tyres made by the Challenge Rubber Mills are not on show at Olympia. They were under the ban of the R.A.C.—or at least the Challenge people assumed so. Thereby hangs a dispute of some interest revealed in correspondence published on the eve of the opening of the exhibition. The R.A.C. objected to a trial in which the Victor was to take part, "since it was not being held under the observation of the Club and was an infringement of the competition rules of the Club". The Secretary wrote to the Challenge Mills on 30 October to say that the trial would render the Victor tyres liable to disqualification in all future competitions, and that the matter was to be considered at a meeting of the R.A.C. on 5 November. The Challenge Company was invited to place any explanation it had to offer before the meeting, or to send a representative to show cause why "the sentence of disqualification" should not be carried out.

Mr. Yarworth Jones, managing director of the Challenge, replied that the Secretary on 1 August—that is three months before his latest letter—had informed him that if the rules of the Club were infringed the Victor tyres would be disqualified in all competitions and could not exhibit at Olympia. It seems that the Challenge were prepared to conduct the trial according to the rules drawn up by the Club, but the Club finally refused to have anything to do with it—why we are not told. Having then apparently passed sentence in August, the Club called a meeting in November to consider the evidence. That is hardly in strict conformity with either dignity or justice. Mr. Jones expressed his willingness to attend before the Committee of the Club, and particularly requested that the Committee should be ready with an answer to his question as to the action it took to the detriment of the company because the test the Club refused to conduct was carried out. We gather that the Committee has not seen Mr. Jones, and, failing some fuller explanation than is contained in the correspondence, its treatment of the Challenge Mills must be held to have been unfair and inexcusable. Has the Club nothing to say in answer to Mr. Jones' letter of 1 November?

Is the pneumatic tyre soon to be superseded? Various patents have been taken out and various schemes have been elaborated for dispensing with a

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system which makes punctures the ever-present dread of motorist and cyclist. The latest of these devices is the Airless Resilient Wheel. Its purpose is to do with steel springs inside the wheel what is now done by the pneumatic tube. The Airless Resilient is really two wheels: a smaller one round which the steel springs are arranged, and a larger with rubber tyres, described as a floating rim. It is a most ingenious device, and after months of experiment the springs can now be adapted to any weight of car. No matter apparently where or what pressure comes to the outer rim, the effect of shock is evenly distributed over the springs, and it is claimed for the wheel that it has all the advantages of resilience attached to the inflated tyre and none of its disadvantages. If the Airless Resilient Wheel in practice does as well as during the long trials to which it has been subjected, it will mean an immense advance in the comfort and confidence of the motorist. Its initial cost is bound to be heavier than that of the ordinary wheel, but the outlay should make for ultimate economy.

Every exhibition brings profit to the printer, but never perhaps has "literature" been so freely distributed as in the Motor Show this week. Handbills and brochures descriptive of the merits of firms and cars have simply been poured on the visitor. One of the smartest efforts was a sixty-four page illustrated booklet got out by the Clement-Talbot. It consisted of telling extracts from opinions on the "All British" Talbot cars taken from the leading technical and general papers right down to the morning of Monday last. The pamphlet shows an extraordinary consensus of opinion in favour of the "Invincible", but it also contains some points which will be read with interest apart from their association with a particular firm. The "All British" note about the Talbot is not to be ignored.

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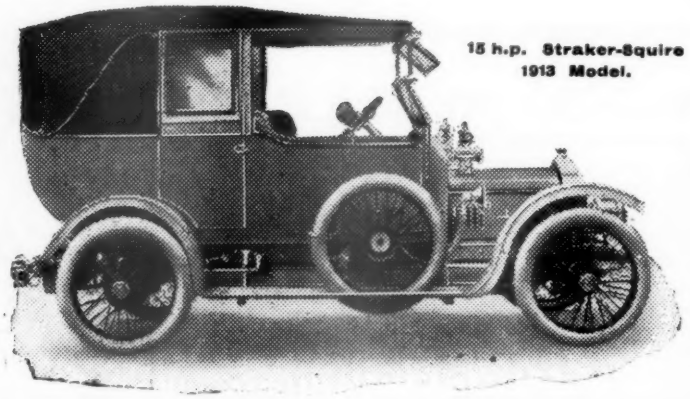

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